IOWA UTILITIES BOARD RESPONSE TO DOE QUESTIONS ON BENEFITS OF ECONOMIC DISPATCH

SEPTEMBER 21, 2005

1) What are the procedures now used in your region for economic dispatch? Who is performing the dispatch (a utility, an ISO or RTO, or other) and over how large an area (geographic scope, MW load, MW generation resources, number of retail customers within the dispatch area)?

MidAmerican Energy (MidAmerican) and Interstate Power and Light Company (IPL), also known as Alliant–west, are the two investor owned utilities that operate in Iowa. MidAmerican serves 609,725 customers in Iowa and owns 4481 MW of generation with 416 MW of purchases to serve its load. IPL serves 529,000 customers in Iowa and has adjusted capacity of 4116 MW.

There is a mixed bag of procedures used in Iowa because IPL is a member of the RTO called Midwest Independent System Operator (MISO) whereas MidAmerican is not a member of any RTO. MISO monitors the transmission grid across much of the Midwest, including Iowa. MISO has 36 balancing areas within its reliability monitoring area. Each Iowa utility forms a balancing area within the MISO reliability monitoring area. MidAmerican does its own economic dispatch. MidAmerican has reliability coordination agreements with MISO through the Midwest Reliability Organization, which means MISO can request redispatch due to reliability concerns.

MISO uses the "security constrained economic dispatch" program every five minutes of each operating hour. MISO sends control areas Net Scheduled Interchange and basepoints for generators. Balancing areas are responsible for regulation between dispatch interval and for operating reserves. Essentially, MISO does the economic dispatch for all of its members, including IPL, every five minutes.

2) Is the Act's definition of economic dispatch (see above) appropriate? Over what geographic scale or area should economic dispatch be practiced? Besides cost and reliability, are there any other factors or considerations that should be considered in economic dispatch, and why?

The Iowa Utilities Board (IUB) believes the definition could be more complete if it included more emphasis on the ability of security constrained economic dispatch to effect the reliability of electric bulk power systems on a broad regional basis. The way the definition is worded currently appears to place the primary emphasis on economics. The IUB is a member of the Organization of MISO States and has been closely observing the MISO Midwest Market Initiative over the the last five-plus months since its commencement. After analyzing the data that is being collected in the Midwest, the IUB believes that economic dispatch, provided over a broad region together with a Locational Marginal Price (LMP) based congestion management, will show that it allows reliability coordinators to respond more quickly to bulk power system anomalies than using a combination of economic dispatch at the control/balancing authority area level with a Transmission Line Relief (TLR) order based system to manage transmission congestion between control/balancing areas over the same footprint.

3) How do economic dispatch procedures differ for different classes of generation, including utility-owned versus non-utility generation? Do actual operational practices differ from the formal procedures required under tariff or federal or state rules, or from the economic dispatch definition above? If there is a difference, please indicate what the difference is, how often this occurs, and its impacts upon non-utility generation and upon retail electricity users. If you have specific analyses or studies that document your position, please provide them.

Security constrained economic dispatch, properly implemented, recognizes the differing operating characteristics of all generating units (utility-owned and non-utility owned) being dispatched; this includes both their operational limits and those of the transmission systems that will transmit the electricity to the load serving entity level. The IUB expects the DOE will find that specific methodologies for effectively dispatching fleets of generators will be detailed in operating/business practice manuals. Such manuals, while aligned with and intending to implement the much more general requirements of tariffs and federal and state rules, will provide detailed descriptions of the process(es) used.

4) What changes in economic dispatch procedures would lead to more non-utility generator dispatch? If you think that changes are needed to current economic dispatch procedures in your area to better enable economic dispatch participation by nonutility generators, please explain the changes you recommend.

The Midwest ISO commenced energy market operations within its footprint on April 1, 2005. Several months before that, other Midwestern utilities joined the PJM Interconnection (PJM). MISO and PJM are working toward the institution of a Joint and Common Market (JCM). The IUB believes an appropriately designed, cost effective JCM has the potential to enhance commerce over the combined MISO-PJM footprint. Such enhancement should improve economic dispatch procedures over the footprint, which could in turn improve economic dispatch participation by non-utility generators.

The Midwest ISO also is studying whether and when to implement Ancillary Services Markets. Their implementation could have an effect on economic dispatch participation by non-utility generators.

5) If economic dispatch causes greater dispatch and use of non-utility generation, what effects might this have – on the grid, on the mix of energy and capacity available to retail customers, to energy prices and costs, to environmental emissions, or other impacts? How would this affect retail customers in particular states or nationwide? If you have specific analyses to support your position, please provide them to us.

No response provided.

6) Could there be any implications for grid reliability – positive or negative – from greater use of economic dispatch? If so, how should economic dispatch be modified or enhanced to protect reliability?

See response to Question 2.